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Cooperative Economic Insect Report

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PLANT PROTECTION AND QUARANTINE PROGRAMS
ANIMAL AND PLANT HEALTH INSPECTION SERVICE
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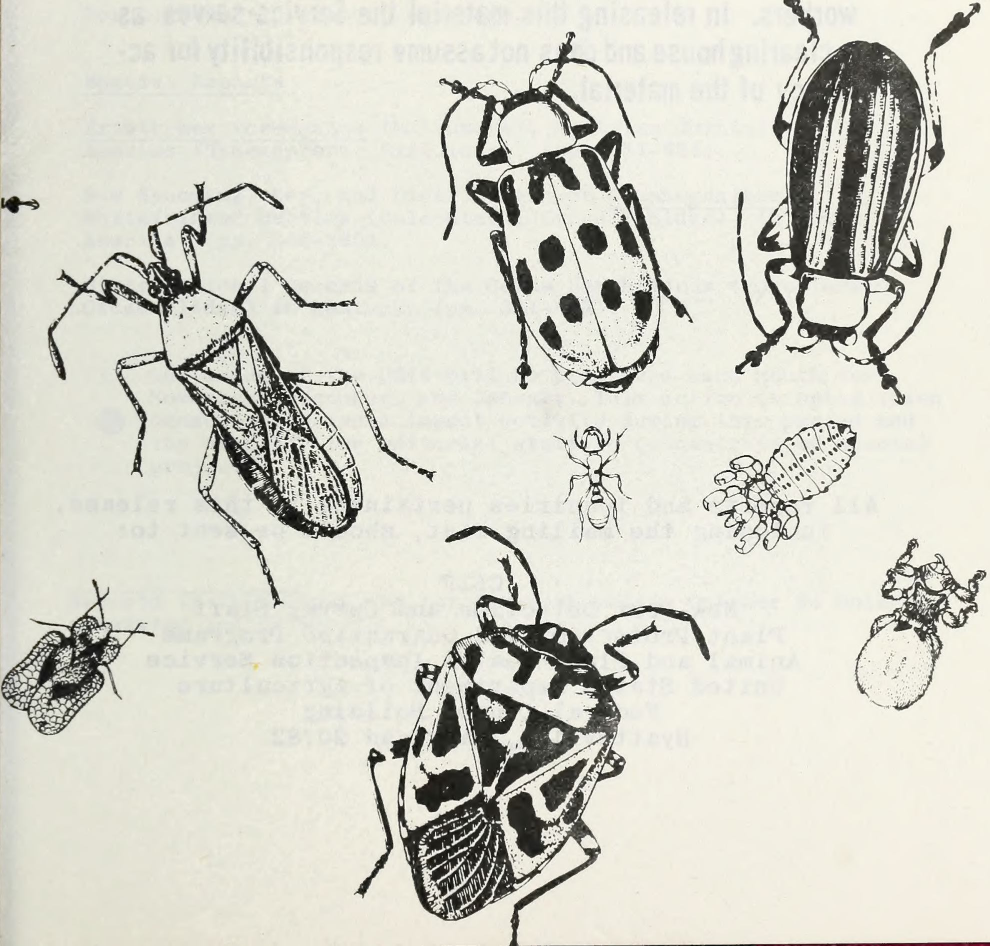

ANIMAL AND PLANT HEALTH INSPECTION SERVICE
PLANT PROTECTION AND QUARANTINE PROGRAMS
NEW PEST DETECTION AND SURVEY STAFF

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Service serves as a clearing house and does not assume responsibility for accuracy of the material.

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CEIR
New Pest Detection and Survey Staff
Plant Protection and Quarantine Programs
Animal and Plant Health Inspection Service
United States Department of Agriculture
Federal Center Building
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Volume 25 October 31, 1975 Number 44

COOPERATIVE ECONOMIC INSECT REPORT

HIGHLIGHTS

Current Conditions

SOUTHWESTERN CORN BORER damage heavy in parts of New Mexico and Tennessee. (p. 843).

FALL ARMYWORM damage to cotton extensive for first time in Alabama. (p. 845).

First SCREWWORM cases in California for season. (p. 846).

More MEDITERRANEAN FRUIT FLY adults found. (p. 847).

Detection

New State records include a PUNCTUREVINE SEED WEEVIL in Kansas (p. 846) and a SOLDIER FLY in New Hampshire (p. 849).

For new county records, see page 849.

Special Reports

Eriotremex formosanus (Matsumura), An Asian Horntail in North America (Hymenoptera: Siricidae). (pp. 851-854).

New Synonyms, Key, and Distribution of *Graphognathus*, Whitefringed Beetles (Coleoptera: Curculionidae), in North America. (pp. 855-860).

Distributional Records of the Genus *Scaphoideus* (Homoptera: Cicadellidae) in Kentucky. (pp. 861-864).

● One issue of the CEIR will be published each month for November, December, and January. This action is being taken because of reduced insect activity during this period and the need for the editorial staff to concentrate on special projects.

Reports in this issue are for the week ending October 24 unles otherwise indicated.

CONTENTS

Special Insects of Regional Significance.....................843

Insects Affecting

Corn, Sorghum, Sugarcane..843
Small Grains..............843
Turf, Pastures, Rangeland.844
Forage Legumes............844
Soybeans..................844
Cotton....................845
Cole Crops................845
Deciduous Fruits and Nuts...845
Small Fruits................845
Ornamentals.................845
Forest and Shade Trees......845
Man and Animals.............846
Stored Products.............846

Beneficial Insects.......................................846
Federal and State Plant Protection Programs..................847
Light Trap Collections.......................................847
Hawaii Insect Report...848
Detection..849
Eriotremex formosanus (Matsumura), An Asian Horntail in North America (Hymenoptera: Siricidae)..................851
New Synonyms, Key, and Distribution of Graphognathus, Whitefringed Beetles (Coleoptera: Curculionidae), in North America..855
Distributional Records of the Genus Scaphoideus (Homoptera: Cicadellidae) in Kentucky...............................861

WEATHER OF THE WEEK ENDING OCTOBER 26

Reprinted from Weekly Weather and Crop Bulletin supplied by National Weather Service, NOAA.

HIGHLIGHTS: While much of the northern and central Rockies was ankle-deep in snow, the eastern third of the Nation basked under summer-like temperatures that in some spots pushed to record high levels. Unseasonably warm weather was common east of Mississippi, especially around the upper Great Lakes. In the central United States, the rains that the southern Plains wished for didn't arrive but instead turned up in the Midwest in the Mississippi and Ohio Valleys.

TEMPERATURE AND PRECIPITATION: A rundown of Monday's weather showed rainshowers and cool temperatures across the Pacific Northwest and Southwest. Fair cool weather prevailed eastward to the Mississippi Valley and in the southeast portions of the Nation. Heavy morning rains in the Northeast caused landslides and washouts that closed roads in New Hampshire and Vermont. Flash flood watches posted earlier in the day for New England were lifted when showers diminished in the evening. Elsewhere, California experienced an unusual outbreak of showers and thundershowers. Storms developed in Arizona and light rains dampened the coastal sections of Washington State and Oregon. Widespread fair weather favored much of the Nation, throughout Monday considerable cloudiness persisted across the northern tier of States into the central Appalachains. Rains in the northeast moved into the Atlantic on Tuesday morning but clouds lingered over the northern States from Ocean to Ocean. From the Pacific, widespread fog

Weather of the week continued on page 850.

SPECIAL INSECTS OF REGIONAL SIGNIFICANCE

BEET LEAFHOPPER (Circulifer tenellus) - CALIFORNIA - Treatments continued, mainly in Kern County. Total of 19,533 acres treated past week with 386 acres of total applied at Gorman, Los Angeles County. Total of 27,583 acres treated to October 24. (Cal. Coop. Rpt.).

CORN EARWORM (Heliothis zea) - TENNESSEE - Damaged 1,000 acres of Dyer County soybeans; 750 acres treated. (Lloyd). KANSAS - Losses in corn, mainly due to this species, surveyed in 60 counties September 8 to October 3. Kernels consumed averaged 1.6 and 2.3 percent, more than twice as high as in 1974, in 3 districts. (Bell).

GREENBUG (Schizaphis graminum) - MISSISSIPPI - This species, Rhopalosiphum padi (an aphid), and other aphids light to moderate on winter wheat statewide. R. padi dominant. (Robinson). OKLAHOMA - Greenbug 1-2 per linear foot in 2 of 3 wheatfields in Jackson County. Light in one field each in Texas and Payne Counties. (Okla. Coop. Sur.). KANSAS - Some light infestations on wheat surveyed in eastern half of State; highest averaged 27 per drill row foot in 4-inch wheat in Dickinson County near Abilene. (Bell). IDAHO - Light and spotted in many Latah County small grain fields. Economic only in small spots in occasional field. (Dailey et al.). WASHINGTON - General throughout Benton County, damaging in some small grain fields. (Rasmussen, Gerlitz).

SPOTTED ALFALFA APHID (Therioaphis maculata) - NEW MEXICO - Up to 20 per 25 sweeps of forage legumes near San Jon, Quay County. (N.M. Coop. Rpt.). KANSAS - High averages of 150 per sweep on drought-stressed alfalfa in Morris County. Counts per sweep by county, (one field each): Morris trace, Saline 50, McPherson 50, Montgomery 10, and Wilson 15. (Bell). NORTH DAKOTA - Ranged 10-20 per 100 sweeps of alfalfa in Emmons, Logan, and McIntosh Counties, September 22, 1975. Collected and determined by W.J. Brandvik. These are all new county records. (Brandvik).

CORN, SORGHUM, SUGARCANE

SOUTHWESTERN CORN BORER (Diatraea grandiosella) - NEW MEXICO - Infested up to 100 percent of cornstalks near Clayton, Union County, and Tucumcari, Quay County. (N.M. Coop. Rpt.). TENNESSEE - Lodged cornstalks in late-planted fields in central and western areas. Damage heavy in several fields. (Gordon, Bruer).

SMALL GRAINS

LESSER CORNSTALK BORER (Elasmopalpus lignosellus) - TEXAS - Heavy, spotted stand reduction in Hardeman County wheatfield. (Boring).

FALL ARMYWORM (Spodoptera frugiperda) - TEXAS - Ranged 2-3 per linear foot of seedling wheat in Roberts County. (Patrick).

HESSIAN FLY (Mayetiola destructor) - KANSAS - Larvae infested up to 28 percent of tillers in Wilson County wheat. (Bell).

AN APHID (*Rhopalosiphum padi*) - TEXAS - Ranged 0-10 per linear foot in Roberts County wheatfields. (Patrick). KANSAS - Light on wheat in Dickinson, Saline, and Morris Counties. (Bell).

BROWN WHEAT MITE (*Petrobia latens*) - TEXAS - Damaging populations in Sherman County wheatfields. Infestations heavy in spots in McCulloch County. (Patrick, McWhorter).

TURF, PASTURES, RANGELAND

HAIRY CHINCH BUG (*Blissus leucopterus hirtus*) - MARYLAND - Adult and nymphal damage continued on turf grasses. Damage in Frederick, Montgomery, and Charles Counties. Ranged 8-30 per square foot in most heavily infested lawns. (U. Md., Ent. Dept.).

RANGE CATERPILLAR (*Hemileuca oliviae*) - NEW MEXICO - Adult emergence about 95 percent completed, in Lincoln and Chaves Counties. Flights heavy near Wagon Mound, Mora County, and Des Moines south to Grenville, Union County. (N.M. Coop. Rpt.).

FORAGE LEGUMES

ALFALFA WEEVIL (*Hypera postica*) - NEW MEXICO - Very late larvae 1-2 per 25 sweeps near Tucumcari, Quay County. (N.M. Coop. Rpt.). OKLAHOMA - Adults averaged 2 per 10 sweeps of Jackson County alfalfa. (Okla. Coop. Sur.). KANSAS - Adults per 100 sweeps in 7 to 11-inch alfalfa by county: Montgomery 6 and Miami 4-20. (Bell). MISSOURI - Adults 4-13 per 10 sweeps of northwest area alfalfa. Egg laying in all fields surveyed. (Munson). KENTUCKY - Adults very light in some alfalfa fields, up to 40 per 100 sweeps in other fields, week ending October 10. Currently, eggs averaged 1.75 and 0.2 per square foot in alfalfa at 2 Fayette County locations. (Barnett, Parr).

CORN ROOTWORMS (*Diabrotica* spp.) - NORTH DAKOTA - *D. undecimpunctata howardi* (southern corn rootworm) adults 1-10 per 100 sweeps on alfalfa in Logan and McIntosh Counties, September 22, 1975. Collected and determined by W.J. Brandvik. *D. longicornis* (northern corn rootworm) adults one per 100 sweeps and 2 per 100 sweeps in 2 fields in Sargent County, September 22, 1975. Collected and determined by C.G. Scholl. These are new county records. (Brandvik, Scholl).

SOYBEANS

VELVETBEAN CATERPILLAR (*Anticarsia gemmatalis*) - ALABAMA - Late-developing larvae defoliated 100 acres of soybeans and destroyed about 5 bushels per acre on Dallas County farm. Fungus disease eliminated larvae. (Alsobrook).

GREEN CLOVERWORM (*Plathypena scabra*) - TEXAS - Infestations heavy, damage significant, in Knox County soybeans. (Boring).

SOYBEAN LOOPER (*Pseudoplusia includens*) - TEXAS - Activity heavy past 14 days. Stripped foliage from soybeans in some Knox County fields. (Boring).

COTTON

FALL ARMYWORM (Spodoptera frugiperda) - ALABAMA - Larvae collected from cotton bolls, blooms, and squares in Bibb and Autauga Counties in late August and early September. Economic pest similar to bollworms in about 10 counties this season and first time so widespread and damaging in cotton. (McQueen).

COLE CROPS

CABBAGE LOOPER (Trichoplusia ni) - TEXAS - Moderate to heavy on home plantings of broccoli, cabbage, and cauliflower at Uvalde, Uvalde County. (Stewart). MARYLAND - Damage in untreated cole crops appeared moderate. Larvae, 2-4 per plant, decreased very rapidly due to natural virus disease; sprays stopped in most fields. (U. Md., Ent. Dept.).

IMPORTED CABBAGEWORM (Pieris rapae) - MARYLAND - Larvae 1-10 per plant in most Eastern Shore cole crops. Egg laying decreased rapidly past 8 days. Counts and damage peaked. (U. Md., Ent. Dept.).

DECIDUOUS FRUITS AND NUTS

PEACHTREE BORER (Sanninoidea exitiosa) - OKLAHOMA - Heavy on Comanche County peach trees. (Okla. Coop. Sur.).

SMALL FRUITS

WESTERN GRAPELEAF SKELETONIZER (Harrisina brillians) - CALIFORNIA - Collected at Sutter Creek, Amador County, September 23, 1975, by Rhodes (initials unknown). Determined by T. Eichlin. This is a new county record. Additional surveys showed 5 properties infested at Sutter Creek and Pine Grove areas; treatments applied. (Cal. Coop. Rpt.).

ORNAMENTALS

ARMORED SCALES - ALABAMA - Hemiberlesia lataniae collected on Aralia elata (fatsia) in Bibb County July 29, 1975. Pinnaspis aspidistrae (fern scale) collected on fern at Echo, Dale County, July 24, 1975. Collected by W.N. Stephenson. Determined by M.L. Williams. These are new county records. (McQueen). TEXAS - Unaspis euonymi (euonymous scale) still very heavy on euonymous throughout north-central area. Heavy in parts of Hardeman and Knox Counties. (Turney, Boring).

FOREST AND SHADE TREES

A SIRICID WASP (Eriotremex formosanus) - ALABAMA - Adults and immatures collected from water oak and pine firewood at Elba, Coffee County. Collected by W. N. Stephenson July 10, 1975. Determined by D. R. Smith. This is a new county record. (Stephenson). Now known to be in Butler, Coffee, and Covington Counties. See pp. 851-854 for special report on this wasp.

MAN AND ANIMALS

SCREWWORM (*Cochliomyia hominivorax*) - Total of 1,878 cases reported from continental U.S. September 28 to October 11 as follows: Texas 1,770; Oklahoma 2; New Mexico 34; Arizona 70; California 2. Total of 1,725 cases confirmed in portion of Barrier Zone in Republic of Mexico. Total of 623 cases reported in Mexico south of Barrier Zone. Number of sterile flies released this period totaled 318,650,300 as follows: Texas 258,512,300; New Mexico 14,184,000; Arizona 45,774,000; California 180,000. Total of 7,240,000 sterile flies released within Barrier of Mexico. (Vet. Serv.).

HORN FLY (*Haematobia irritans*) - TEXAS - Ranged 100-200 per head on cattle in Panhandle area. Moderate in Hardeman, Knox, and Wilbarger Counties. (Patrick, Boring). OKLAHOMA - Still moderate to heavy on cattle in Comanche County. (Okla. Coop. Sur.).

FACE FLY (*Musca autumnalis*) - CALIFORNIA - Larvae collected from cattle feces at 3 locations 8-12 miles east of Fresno, Fresno County, by G.H. Gretz September 19, 1975. Determined by R.J. Gagne. This is a new county record. (Rogoff). MISSISSIPPI - Adults sought overwintering sites in Pontotoc, Lee, and Chickasaw Counties. Averaged 50 per face on cattle in Pontotoc County, ranged 5-10 in Chickasaw County, and 4-6 in Oktibbeha County. (Combs). KENTUCKY - Adults taken in pasture near cattle in Hardin County October 7, 1975. Collected and determined by D. Barnett. Confirmed by F. Knapp. This is a new county record. (Barnett).

STORED PRODUCTS

POTATO TUBERWORM (*Phthorimaea operculella*) - MARYLAND - Heavy in home-stored potatoes in Wicomico, Charles, and Dorchester Counties past 14 days. No easy and effective controls available to date. (U. Md., Ent. Dept.).

BENEFICIAL INSECTS

A PUNCTUREVINE SEED WEEVIL (*Microlarinus lareynii*) - KANSAS - Taken from puncturevine near Hardtner, Barber County, August 12, 1975. Collected and determined by D.C. Arnold. This is a new State record. Released in Kearney and Morton Counties August 1, 1963, but failed to become established. Apparently moved northward into State from Oklahoma where successful releases made. (Bell).

A TACHINA FLY (*Exorista larvarum*) - NEW MEXICO - Several adults reared from *Hemileuca oliviae* (range caterpillar) pupae collected in northern Lincoln County by W. Iselin September 30, 1975. Determined by C.W. Sabrosky. This is a new county record. (N.M. Coop. Rpt.).

FEDERAL AND STATE PLANT PROTECTION PROGRAMS

GRASSHOPPERS - KANSAS - Adult survey during September showed economic infestations (8 or more per square yard) in isolated stops in Sherman, Washington, Marshall, and Nemaha Counties. Moderate, 3-7 per square yard, on rangeland in Flint Hill area, southern one-half of Barber and Comanche Counties, along Cimarron River in Mead and Seward Counties and small areas in Wallace and Cheyenne Counties. Cropland infestations moderate throughout most of northeast district and in Washington County. *Melanoplus bivitattus* and *M. differentialis* in all districts, *M. femurrubrum* common in all districts except west-central, southwest, south-central, and southeast where *M. sanguinipes* dominated. *Ageneotettix deorum*, *Aulocara elliotti*, and *Trachyrhachis kiowa* dominant on rangeland in northwest, southwest, north-central, south-central, and east-central districts. (Bell).

PINK BOLLWORM (*Pectinophora gossypiella*) - NEW MEXICO - Young larvae, less than 10 days old, infested 12 percent of green cotton bolls in fields south of Carlsbad, Eddy County, October 15 and 16. (N.M. Coop. Rpt.).

WHITEFRINGED BEETLES (*Graphognathus* spp.) - ALABAMA - Full-grown larvae bored holes into damaged sweetpotatoes in several spots of 15-acre Cullman County field. (Baswell).

MEDITERRANEAN FRUIT FLY (*Ceratitis capitata*) - CALIFORNIA - Total finds to October 30 in State: 25 males, 16 females, 35 larvae, and 6 pupae at Mar Vista, Santa Monica, and Venice, Los Angeles County. Adults found at 11 locations. (Cal. Coop. Rpt.).

LIGHT TRAP COLLECTIONS

FLORIDA - Gainesville, 10/17-23, BL, Armyworm (*Pseudaletia unipuncta*) 5, BEET ARMYWORM (*Spodoptera exigua*) 2, GRANULATE CUTWORM (*Feltia subterranea*) 17, FALL ARMYWORM (*S. frugiperda*) 7, YELLOWSTRIPED ARMYWORM (*S. ornithogalli*) 1.

KANSAS - Rossville, 10/20, BL, ARMY CUTWORM (*Euxoa auxiliaris*) 25, armyworm 80, BLACK CUTWORM (*Agrotis ipsilon*) 17, BOLLWORM (*Heliothis zea*) 294, fall armyworm 42, VARIEGATED CUTWORM (*Peridroma saucia*) 23, WHEAT HEAD ARMYWORM (*Faronta diffusa*) 2, yellowstriped armyworm 7. KENTUCKY - Fayette County, 10/20-24, BL, armyworm 3, black cutworm 3, yellowstriped armyworm 6.

MISSISSIPPI - Stoneville, 10/17-23, temp. 39-80 F., precip. 0.79, 2BL, armyworm 39, beet armyworm 216, black cutworm 8, bollworm 201, CABBAGE LOOPER (*Trichoplusia ni*) 13, fall armyworm 164, granulate cutworm 28, TOBACCO BUDWORM (*H. virescens*) 41, variegated cutworm 6. PENNSYLVANIA (Districts) - Central, 10/20-22, 2BL, armyworm 1, bollworm 2, fall armyworm 3, variegated cutworm 2, yellowstriped armyworm 2. Southeast, 10/20-22, BL, armyworm 2, yellowstriped armyworm 1.

HAWAII INSECT REPORT

General Vegetables - BROAD MITE (Polyphagotarsonemus latus) damage heavy in 180-270 square feet of 0.5-acre bittermelon planting at Waianae, Oahu. Eggs on stems and leaves too numerous to count. Treatments seemed effective. All stages light in 1.5 acres of bell pepper at Lualualei, Oahu. Damage not very noticeable. CARMINE SPIDER MITE (Tetranychus cinnabarinus) heavy, 30+ per square inch, in 0.5-acre long beans at Waianae; all stages present. Light, 1-10 per square inch in 1.5 acre eggplant and 1.5 acre bell pepper at Lualualei. (Mau).

Fruits and Ornamentals - All stages of ORANGE SPINY WHITEFLY (Aleurocanthus spiniferus) infested 14 rose plants at single residence at Hahaione Valley, Oahu. Infestation moderate, 25+ per leaflet with 14 percent leaves infested. Infestation first found in area and 7.5 miles east of original infestation site at Kapahulu, Oahu. (Fine et al.).

Man and Animals - Female mosquito collections during September in 80 traps on Oahu as follows: Aedes vexans nocturnus 121 (averaged 1.5 per trap); Culex pipiens quinquefasciatus 2,671 (averaged 33.4). Populations below that of August. (Vector Control Br., Haw. Dept. Health).

Beneficial Insects - A TINGID BUG (Leptobrysa decora) defoliated large patches of lantana during late September along several miles of road between 1,700-2,000 feet elevation at Kokee, Kauai. All stages noted on remaining foliage. (Sugawa). Defoliation of Hamakua pamakani by a PTEROPHORID MOTH (Oidaematophorus sp.) at Volcano, Hawaii, averaged 10 and up to 75 percent in isolated locations. Defoliation ranged 5-50 percent at Kona depending on location and density of pamakani stands. Trace Oidaematophorus and Procecidochares alani (a tephritid fly) infestations reported for first time from Honomalino and Ahualoa, Hawaii. (Matayoshi). Parasitism of Ophiomyia phaseoli (bean fly) by Opius phaseoli and O. importatus in snap beans on Kauai ranged from 88 to 100 percent (Mau).

DETECTION

New State Records

A SOLDIER FLY (Hermetia illucens) - NEW HAMPSHIRE - One female collected near Warner, Merrimack County, by D. Barry September 16, 1972. Determined by J.F. Burger. (Burger).

A PUNCTUREVINE SEED WEEVIL (Microlarinus lareynii) - KANSAS - Barber County. (p. 846).

New County Records

AN ARMORED SCALE (Hemiberlesia lataniae) ALABAMA - Bibb (p. 845).

FACE FLY (Musca autumnalis) CALIFORNIA - Fresno (p. 846). MISSISSIPPI - Hardin (p. 846).

FERN SCALE (Pinnaspis aspidistrae) ALABAMA - Dale (p. 845).

NORTHERN CORN ROOTWORM (Diabrotica longicornis) NORTH DAKOTA - Sargent (p. 844).

A SIRICID WASP (Eriotremex formosanus) ALABAMA - Coffee (p. 845).

SOUTHERN CORN ROOTWORM (Diabrotica undecimpunctata howardi) NORTH DAKOTA - Logan, McIntosh (p. 844).

SPOTTED ALFALFA APHID (Therioaphis maculata) NORTH DAKOTA - Emmons, Logan, McIntosh. (p. 843).

A TACHINA FLY (Exorista larvarum) NEW MEXICO - Lincoln (p. 846).

WESTERN GRAPELEAF SKELETONIZER (Harrisina brillians) CALIFORNIA - Amador (p. 845).

Weather of the week continued from page 842.

crept inland to the coastal valleys of central California reducing visibility to near zero at times. In the northeast corner of the Nation, locally dense fog over most of Maine began to lift by sunrise. While most of the Nation enjoyed a sunny mild Tuesday, winter staked a claim in the northern Rockies. Snow already blanketed the western and central Montana, forecasters warned southern Idaho of heavy snows to come. At midweek, a winter storm swept across the northern Rockies, dumped snow over most of Montana and the mountains of western and northern Wyoming. By 7 a.m. Wednesday, Lewiston, Montana, had collected 7 inches and Cody, Wyoming, 4 inches. Northwest of the storm, cold air shoved the mercury to below freezing from Washington and Oregon eastward into the western Dakotas. Southeast of the storm, a strong southerly flow of warm air pushed the morning temperatures into unseasonably warm 60's in the eastern Plains, central Mississippi Valley, and Northeast. Record highs were pinned on Pueblo, Colorado, Baltimore, Maryland, and Portland, Maine. Daytime readings in the 70's and 80's were the rule of the eastern part of the Nation and 50's and 60's dominated the upper Great Lakes area and 30's and 40's in the Northwest. Sharp temperature contrasts in Utah and Nevada ranged from the upper 60's in the southern portions of the two states to the lower 40's in the North. Locally heavy snow, gusty winds, and below freezing temperatures accompanied the storm as it intensified and continued its eastern push Thursday. Ahead of the storm, moist air pulled northward from the gulf and carried showers and thundershowers to the lower Mississippi Valley. All morning, snow fell over most of Wyoming where at lower elevations, Lander accumulated 5 inches and Sheridan and Laramie 3 inches. Mountain stations collected up to 8 inches. A strong low pressure center out of the Rockies made the upper Great Lakes region the scene of windy thundery conditions on Thursday. Elsewhere, cloudy skies in eastern Texas unloaded heavy rains that caused some damage to Galveston, measured over 3 inches in 6 hours. Meantime, mild temperatures prevailed from the southern Plains and the gulf States northward to the Great Lakes and New England. Though more record highs came out of the east, Baltimore, Maryland--78 degrees, some spots in Wyoming froze in the 20's. Friday marked the end of most of the heavy snow in the plains and Rockies as the weakening winter storm turned northward. By that time though, Lander, Wyoming, measured 9 inches of snow and it was even deeper in the Mountains. In parts of the middle Atlantic States, late morning fog on Friday reduced visibility to well below one-quarter mile. In the afternoon, a band of thunderstorms from Wisconsin to eastern Texas and western Louisiana marked the leading edge of cold air that was moving into the Mississippi Valley. East of the Mississippi River, unseasonably warm temperatures included daytime readings in the 80's as far north as West Virginia. For the second day in a row Buffalo, New York, chalked up a record high of 79 degrees. As soon as the low center had moved into Canada, another came in from the Northwest Saturday. Except for this area, sunny skies brightened most of the Nation west of the Mississippi. Over the weekend, the cold air gained more ground in the East, kicking up showers and thundershowers from the western gulf areas into the Ohio Valley. It was a wet end of the week for much of the East when the cold front spread rain from southern New England into the western gulf States. Behind the front, temperatures Sunday fell a noticeable 10 to 20 degrees.

Eriotremex formosanus (Matsumura), An Asian Horntail in North America (Hymenoptera: Siricidae)

David R. Smith [1]

Siricid specimens sent to me for identification from Alabama are a genus and species new to North America. In all respects, the specimens agree with the descriptions and illustrations in the literature of *Eriotremex formosanus* (Matsumura), a species recorded from *Taiwan and Indochina*. They were found emerging from firewood ("water oak," probably *Quercus nigra*) in a home in Dozier, Covington County, Alabama and *were also observed* in Elba, Coffee County, and Evergreen, Butler County, Alabama. This siricid appears to be established in Alabama, and this is the first documented introduction and establishment of an alien siricid in this country. It is not surprising, however, because siricids are commonly carried from their native lands in wood and wood products to all parts of the world by commerce, and many are intercepted in crating and dunnage at U.S. ports of entry by Plant Protection and Quarantine inspectors. A possible avenue for the introduction of *formosanus* is Fort Rucker in southern Alabama at which there has *been considerable* traffic from southeast Asia.

All species of *Eriotremex*, about 10 in number, are found in Asia, and are *generally distributed* from India to Taiwan, Philippines, and New Guinea. Most species are known from only several specimens, and hosts are unknown. The genus belongs to the subfamily Tremicinae for which all known hosts are hardwoods. Our only native species of Tremicinae is *Tremex columba* (L.), a wood borer of many deciduous trees. Upon *further investigation* at the site of collection (Dozier, Alabama) of *formosanus*, W.N. Stephenson, PPQ inspector, found further *evidence of the* presence of this species. Adults and some pupae were found 2-3 inches inside the wood, and exit holes were 0.25 inch in diameter. A dead standing water oak tree and a hardwood log on the ground were found infested. Judging from these observations, *formosanus* may prefer dead, dying, or weakened trees and, *consequently*, may be similar in habits to *Tremex columba*.

The genus Eriotremex is most likely to be confused with *Tremex* in the United States. The two genera may be separated by *the* characters given in couplet 4 of the following revised key to the genera of Siricidae.

Key to Genera of North American Siricidae

1. Hind tibia with two apical spurs 2

Hind tibia with one apical spur 3

---

[1] Systematic Entomology Laboratory, IIBIII, ARS, USDA, Washington, D.C. Mail address: c/o U.S. National Museum, Washington, D.C. 20560.

2. Head with large white spot behind each eye . . . . . *Urocerus*

Head uniformly black, without pale areas . . . . *Sirex*

3. Head with lateral carina behind each eye; antenna long and slender, much longer than thorax and with segments longer than broad . . . . *Xeris*

Head without lateral carinae; antenna short, about as long as thorax, swollen in middle and with segments of flagellum broader than long 4

4. Radial crossvein at center of radial cell in forewing; thorax and abdomen not hairy; disc on 9th tergum at most dull; cerci absent; antenna with about 15 segments . . . . *Tremex*

Radial crossvein at basal third of radial cell of forewing; thorax and terga 7 and 8 densely hairy; disc on 9th tergum densely punctate; cerci present in females; antenna with 20 to 21 segments . . . . *Eriotremex*

Additionally, *E. formosanus* is separated from *T. columba* by the following color pattern: Black with slight violaceous tinge and with following yellow to amber: pronotum; anterior halves of terga 2, 3, and 8 and anterior third of tergum 7, the band on the 8th tergum the broadest; lateral spots on terga 4 to 6; venter of abdomen (to sawsheath); tibiae and basitarsi except at their apices. The hairs of the head and body are golden yellow, and the wings are yellowish to reddish brown with the area around the stigmata of the forewings and the apical margin of each wing infuscated. *Tremex columba* is generally brown or reddish brown, sometimes with a black abdomen with yellow spots or bands, and has the wings uniformly infuscated, but never has the distinct yellow banding, wing pattern, or hairs present in *formosanus*. The male of *E. formosanus* is not known.

References

The following are all the known references pertaining to *E. formosanus* and are listed chronologically by year.

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See illustrations on next page.

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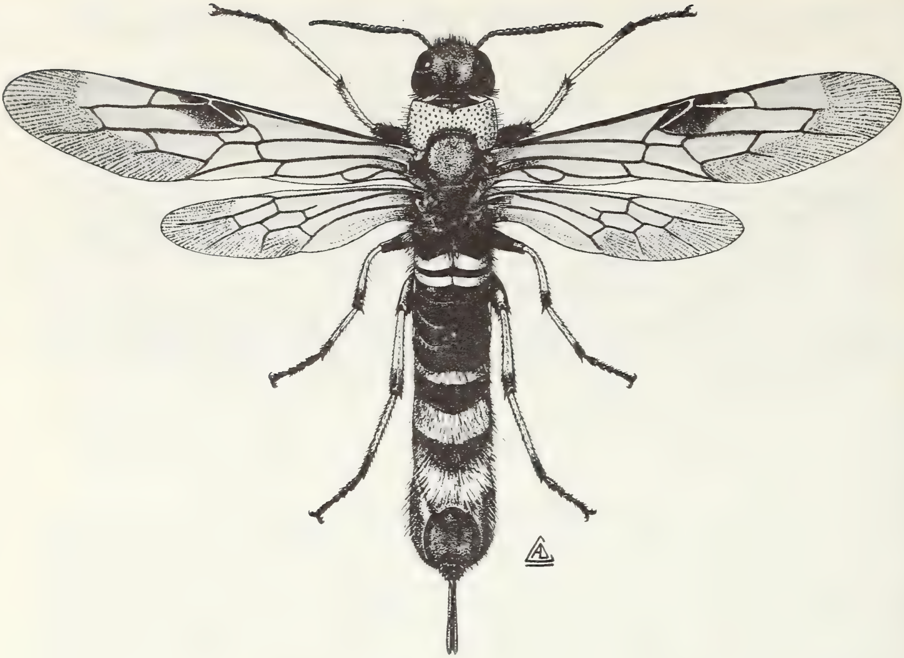

Fig. 1 Eriotremex formosanus (Matsumura), dorsal view of female

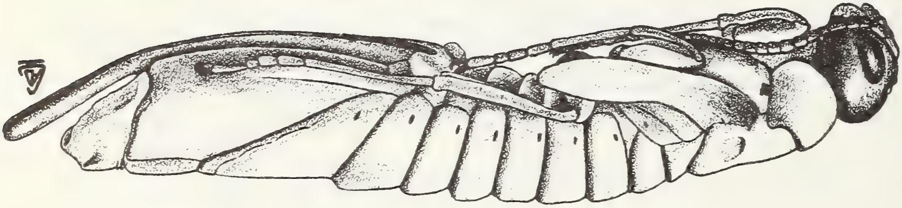

Fig. 2 Lateral view of pupa

New Synonyms, Key, and Distribution of Graphognathus, Whitefringed Beetles (Coleoptera: Curculionidae), in North America

Rose Ella Warner [1]

Abstract

Three species are newly synonymized under Graphognathus leucoloma leucoloma in North America and Graphognathus fecundus is newly raised to species rank. These are the whitefringed bettles, pest of cultivated crops.

The species of the genus Graphognathus, collectively referred to and commonly known as the whitefringed beetles, cause serious damage to many field crops of economic importance in the South and southeastern States.

The whitefringed beetle was first described by Boheman in 1840 as Naupactus leucoloma. The recognition of N. leucoloma in North America dates from 1936 when L.L. Buchanan identified specimens collected in that year near Svea, Florida. Buchanan (1939) described Graphognathus as a subgenus of Pantomorus with Naupactus leucoloma Boh., type-locality, Argentina, as type-species. Pantomorus (Graphognathus) peregrinus was described as new from specimens collected at Gulfport, Mississippi, in 1937, and Pantomorus (Graphognathus) leucoloma (Boh.) was redescribed from specimens collected at Florala, Alabama, in 1937. Four new species were described by Buchanan in 1942, Pantomorus (Graphognathus) minor, type-locality Pensacola, Florida, Pantomorus (Graphognathus) pilosus, type-locality Repton, Alabama, Pantomorus (Graphognathus) striatus, type-locality New Orleans, Louisiana, and Pantomorus (Graphognathus) dubius, type-locality Repton, Alabama. In 1947, Buchanan published a correction to his 1936 identification of the specimens found in Florida, stating that Naupactus leucoloma Boh. did not occur in the United States. The leucoloma of Buchanan was then without a valid name. Buchanan described the species as new and gave it the name fecundus. In this paper, Graphognathus was raised to generic rank and a new subspecies, Graphognathus leucoloma imitator was described.

The following new synonyms are the result of recent examination of the type-specimen of the whitefringed beetle, Naupactus leucoloma Boh. I am convinced that three of Buchanan's species from the United States, striatus, pilosus, and dubius, are the same as Boheman's leucoloma leucoloma from Argentina. Thus leucoloma leucoloma does occur in the United States. I wish to thank Dr. Tord Nyholm of the Naturhistoriska Riksmuseet, Stockholm, Sweden, for the loan of the type-specimen.

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[1] Systematic Entomology Laboratory, IIBIII, ARS, USDA, Mail address: c/o U.S. National Museum, Washington, D.C. 20560

Genus *Graphognathus* Buchanan

Graphognathus leucoloma leucoloma (Boheman)

Naupactus leucoloma Boheman, 1840: 62

Pantomorus (*Graphognathus*) *striatus* Buchanan, 1942: 108 NEW SYNONYM.

Graphognathus leucoloma striatus (Buchanan): Buchanan, 1947: 20.

Pantomorus (*Graphognathus*) *pilosus* Buchanan, 1942: 107. NEW SYNONYM.

Graphognathus leucoloma pilosus (Buchanan): Buchanan, 1947: 20.

Pantomorus (*Graphognathus*) *dubius* Buchanan, 1942: 109. NEW SYNONYM.

Graphognathus leucoloma dubius (Buchanan): Buchanan, 1947: 20.

Graphognathus fecundus Buchanan, NEW STATUS.

Naupactus leucoloma, of Buchanan, 1936: 30, not of Boheman; of Anderson, 1938: 3, not of Boheman.

Graphognathus leucoloma fecundus Buchanan, 1947: 21.

Graphognathus leucoloma imitator Buchanan, 1947: 21. NEW SYNONYM.

Graphognathus peregrinus (Buchanan)

Pantomorus (*Graphognathus*) *peregrinus* Buchanan, 1939: 14; Buchanan, 1942.

Graphognathus peregrinus (Buchanan): Buchanan, 1947: 19.

Graphognathus minor (Buchanan)

Pantomorus (*Graphognathus*) *minor* Buchanan, 1942: 107

Graphognathus minor (Buchanan): Buchanan, 1947: 19.

Key to the Species

1. Vestiture on disc of pronotum prostrate or nearly so; corbel plate of posterior tibia well developed (Fig. 7); rostral groove widened and carinate apically (Fig. 4). Length: 6.5 - 10.5 mm. Distribution (Fig. 11)..............*minor* (Buchanan)

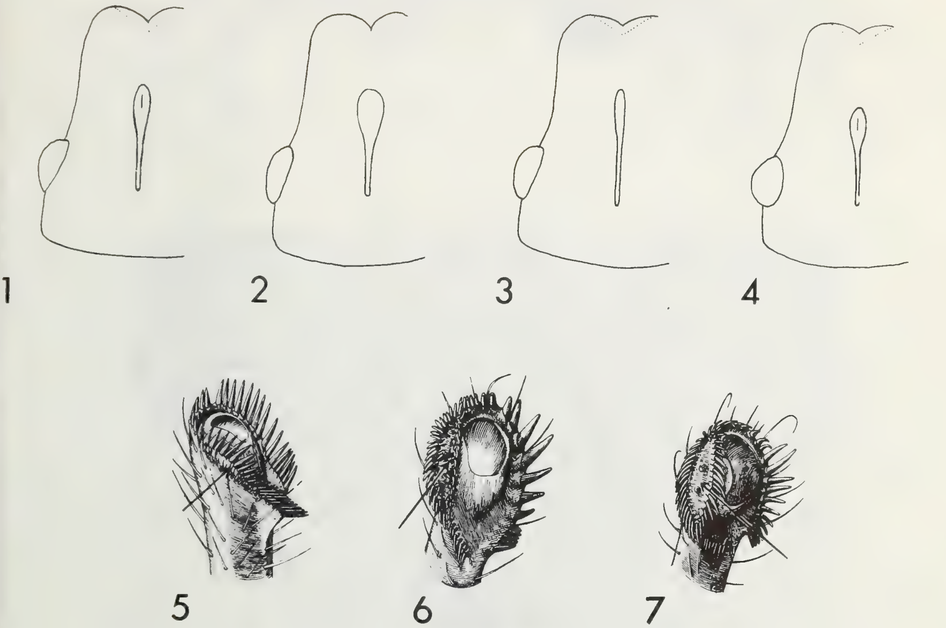
Vestiture on disc of pronotum semi-erect; corbel plate of posterior tibia narrow, feebly defined (Figs. 5,6)..........2

2. Setae and scales along posterior half of median line of pronotum directed posteriorly; rostral groove very little widened apically, not carinate (Fig. 3); dorsal scales dense, obscuring strial lines on elytra. Length: 1 - 10.5 mm. Distribution (Fig. 10).................*peregrinus* (Buchanan)

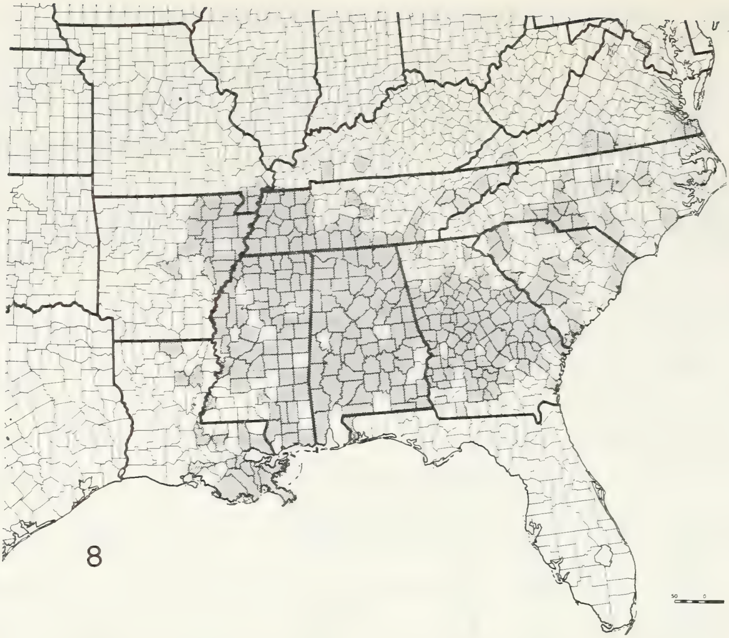
Setae and scales along median line of pronotum directed anteriorly..3

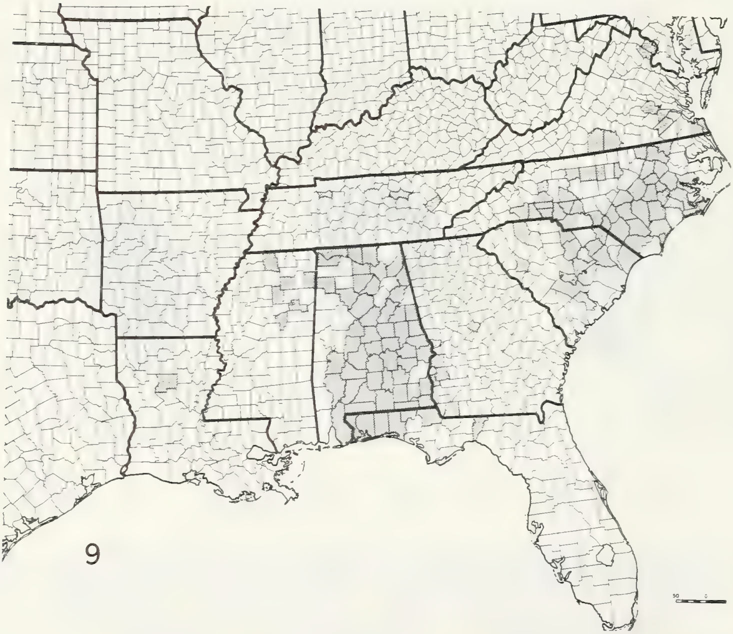
3. Widened apical portion of rostral groove deeper, carinate (Fig. 1); strial lines on elytra usually darker and more distinct. Length: 9-12.7 mm. Distribution (Fig. 8) ....*leucoloma* (Boh.)

Widened apical portion of rostral groove shallow, not carinate (Fig. 2); strial lines on elytra less distinct. Length: 8-12 mm. Distribution (Fig. 9).......................*fecundus* Buchanan

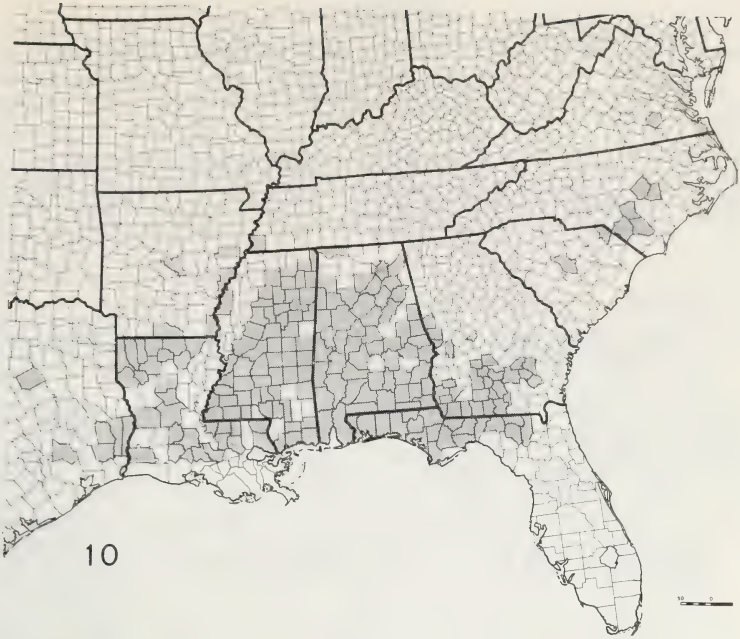


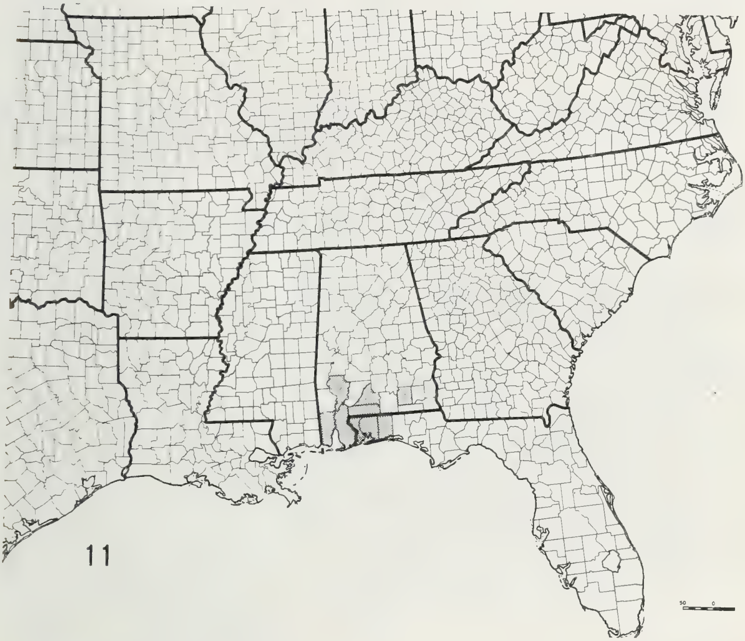
Figs. 1-7. *Graphognathus* spp. 1-4, dorsal surface of rostrum to show rostral groove: 1. *leucoloma*, 2. *fecundus*, 3. *peregrinus*, 4. *minor*, 5-7, apex of posterior tibia, showing corbel: 5. *leucoloma* and *fecundus*, 6. *peregrinus*, 7. *minor*.





Figs. 8-9. Distribution of Graphognathus spp. 8, leucoloma; 9, fecundus.





Figs. 10-11. Distribution of Graphognathus spp. 10, peregrinus; 11, minor.

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Distributional Records of the Genus Scaphoideus (Homoptera: Cicadellidae) in Kentucky

Douglas E. Barnett 1/

Seventeen species are listed with 12 new State and 35 new county records. All determinations were made by the author from adult male specimens. Previously known distribution data and the reference to that data follows each species in parentheses. New State records are designated by (#) and county records by an asterisk (*). Scaphoideus specimens for determining these distributions were solicited from 27 major museums in North America.

Scaphoideus (Latenus) angustatus DeLong and Berry. Specimens were collected in Jefferson County by P.J. Christian during July 22 to August 22, 1955; in Fayette County during June 11-14 and August 24-27, 1971, by P.H. Freytag and G. Leppert 2/; in Morgan County August 1971 by D. Barnett on grass. (Barnett, 1975a).

Scaphoideus (Scaphoideus) atlantus Ball. Specimens were collected in Fayette County # June 24, 1972, and June 26, 1973, by D. Barnett and June 18, 1973, by P.H. Freytag 2/.

Scaphoideus (Scaphoideus) cinerosus Osborn. A specimen was collected in Daviess County July 10, 1948, by W.M. Clay and one on July 10, 1948, by D.A. Young. Six specimens were collected in Jefferson County during June 16-30 and July 1-21, 1954, by P.J. Christian. Five, one, and three specimens were collected in Fayette County during June 13-15 and 16-18 and 22-24, 1970, respectively 2/. (Barnett, 1975a).

Scaphoideus (Scaphoideus) crassus DeLong and Mohr. Specimens were collected in Jefferson County # during July 1-21, 1954, by P.J. Christian and Fayette County *, during August 1-4, 1974, by P.H. Freytag and G. Leppert 2/.

Scaphoideus (Scaphoideus) curvatus DeLong and Mohr. A specimen was collected in Pike County #, August 26, 1972, by V. Johnson.

Scaphoideus (Scaphoideus) immistus (Say). Two specimens were collected in Fayette County # on June 20 and 27, 1910, respectively by an unknown collector. Specimens were collected in Jefferson County June 17, 1940, by J.S. Bangson and Berea, Madison County, June 6 and 25, 1941, by J.S. Bangson. A specimen was collected in Calloway County July 18, 1941, by L. Spann. One specimen was collected in Brandenburg, Meade County, September 14, 1941, by an unknown collector. Four specimens were collected in Warren County * June 22, 1971, by D. Barnett on Concord grape; two specimens were collected in Hickman County * July 15, 1971, by D. Barnett 3/; Graves County * July 16, 1971, by D. Barnett; Daviess County * June 26, 1971, by D. Barnett on Vitis spp.; and Hopkins County * June 12, 1972, by D. Barnett. (Young, 1950; Barnett, 1975b).

Scaphoideus (*Scaphoideus*) *incisus* Osborn. A specimen was collected in Morgan County # August 17, 1974 by E. and D. Barnett.

Scaphoideus (*Lonenus*) *intricatus* Uhler. Specimens were collected in Fayette County on September 20, 1909, on cultivated grape by H. Garman. Fayette County August 19, 1937, by L.H. Townsend, July 28-30, 1970, by P.H. Freytag 2/, July 20, 1971, and July 26, 1973, by D. Barnett. The specimens collected by D. Barnett were nymphs and were reared on elm. (Osborn, 1911).

Scaphoideus (*Scaphoideus*) *luteolus* Van Duzee. Twelve specimens were collected in Jefferson County * during July 1-21, 7-21, 8-9, 16-30, 1954, and July 22 to August 22 and August 23 to September 30, 1955, by P.J. Christian. Two specimens were taken in Jefferson County July 7 and July 19, 1968, in mosquito control operations by an unknown collector. A specimen was collected in Gallatin County * July 19, 1972, by D. Barnett on *Vitis* species. One specimen was taken in Warren County * September 9, 1972, by D. Barnett 3/. Baker identified a specimen from Kentucky but did not give a specific location. (Baker, 1949).

Scaphoideus (*Latenus*) *major* Osborn. Two specimens were taken in Warren County # on September 7, 1972, and one specimen on September 9, 1972, and another on September 26, 1972, by D. Barnett 3/.

Scaphoideus (*Scaphoideus*) *melanotus* Osborn. A specimen was collected in Fayette County # on July 13, 1970, by V. Johnson 3/.

Scaphoideus (*Latenus*) *minor* Osborn. Specimens were collected in Jefferson County # May 14 and July 22 to August 22, 1955, by P.J. Christian and on September 21, 1967, by an unknown collector in mosquito light trap operations. A specimen was collected in Fayette County * August 17, 1971, by D. Barnett. A specimen was collected in Breathitt County * on May 8, 1972, by P.H. Freytag 2/. Specimens were collected by D. Barnett in Warren County * on June 7 and 13, 1972, and September 9 and 27, 1972, by D. Barnett 3/. A specimen was collected in Muhlenberg County * June 13, 1972, by D. Barnett.

Scaphoideus (*Latenus*) *ochraceus* Osborn. A specimen was collected in Breathitt County # on July 26, 1972, by P.H. Freytag 2/; another specimen was collected in Robertson County * July 17, 1973, by D. Barnett.

Scaphoideus (*Scaphoideus*) *opalinus* Osborn. A specimen was collected in Jefferson County # June 27, 1967, during mosquito control operations by an unknown collector 3/. One specimen was collected in Pike County * on May 5-27, 1971, by V. Johnson 3/. A specimen was collected in Trigg County * on June 24, 1971, by D. Barnett on *Juniperus*. Another specimen was collected in Perry County * on August 3, 1971, by D. Barnett 3/. Two specimens were collected in Fayette County * August 13 and 17, 1971, 3/ and 2/, respectively. A specimen was taken in Hickman County * on August 16, 1971, by D. Barnett 3/. Six specimens were taken in Harlan County * by D. Barnett on *Juniperus communis* L. and two specimens from the same host by G. Leppert on the same date. One specimen was taken in Wayne County * on July 18, 1972, on *Juniperus* species and one specimen was collected in Warren County * on July 19, 1972, by D. Barnett.

Scaphoideus (*Scaphoideus*) *paludosus* Ball (= *dilatus* DeLong and Mohr). This species was first collected in the State on July 22, 1940, in Louisville, Jefferson County, by an unspecified collector. However, this specimen was identified as *S. dilatus*, as were other specimens collected on July 23, 24, 27, 28, and 30, 1940. One specimen was collected in Jefferson County during July 22 to August 22, 1955, by P.J. Christian. A specimen was collected in Robertson County * in August of 1974 by D. Barnett. One specimen was taken in Shelby County * on July 17, 1974, by D. Barnett from grass species. A specimen was taken in Pulaski County during August 3-8, 1974, by R. Sperka 3/. One specimen was Taken in Morgan County * on August 20, 1974, by D. Barnett 3/. (Young, 1950).

Scaphoideus (*Latenus*) *productus* Osborn. This species has been previously reported from Kentucky, but this record is questionable, since this species is currently known only from the holotype.

Scaphoideus (*Scaphoideus*) *pullus* DeLong and Mohr. Two specimens were collected on elm in Fayette County # on June 24 and June 26, 1973, by D. Barnett and reared on elm.

Scaphoideus (*Scaphoideus*) *titanus* Ball (= *diutius* DeLong and Mohr) A specimen was collected in Fayette County # on June 22, 1910, by H. Garman. A specimen was collected in Henderson County on July 10, 1948. The collectors initials are assumed to be W.M.C. This specimen was originally identified and listed as *Scaphoideus diutius* by D.A. Young. Two specimens were collected in Jefferson County * during the summer of 1952 by P.J. Christian, and three more during July 1-10 and 1-21, and July 22 to August 22, 1954. Two specimens were collected by P.J. Christian during July 22 to August 22, 1955, in Jefferson County. Two specimens were taken in Jefferson County on July 13 and 27, 1967, by an unknown collector 3/. Two specimens were collected in Fayette County * during July 28-30, 1970, by P.H. Freytag 2/. One specimen was taken in Rockcastle County * August 12, 1970, on *Salix* species by an unknown collector. Two specimens were taken in Fayette County during July 11-14 and 20-21, 1971, by G. Leppert and P.H. Freytag 2/. Two specimens were taken in Daviess County * on August 26, 1971, by D. Barnett on Vitis species. A specimen was collected in Hopkins County * on June 12, 1972, by D. Barnett. One specimen was collected in Grayson County * on June 13, 1972, by C. Sperka. A specimen was taken in Caldwell County * on July 6, 1973, by D. Barnett. One specimen was taken in Shelby County * on July 17, 1974, by D. Barnett from grass species. A specimen was taken in Pulaski County * during August 3-8, 1974, by R. Sperka 3/. One specimen was taken in Morgan County * on August 20, 1974, by D. Barnett 3/. (Young, 1950).

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1/ Extension Survey Entomologist, Insect Survey, Department of Entomology, University of Kentucky, Lexington, KY 40506.

2/ Collected in Malaise trap.

3/ Taken in blacklight trap.

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